ABSTRACT

An instantaneous current and instantaneous voltage of a three-phase coil (10) of a brushless DC motor (6) are detected, and the internal condition of a compressor (1) is predicted from these detection values. The prediction about the internal condition of the compressor (1) is made in such a way that motor driving torque which is a parameter of a motor model is identified and poor lubrication, liquid compression or the like is predicted from this identified motor driving torque. This enables it to make, in real time, a failure forecast, failure diagnosis etc. on the compressor (1).